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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
GRAHAM, SAMUEL E	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,931	SUZUKI ET AL.	
	Examiner	**Art Unit**	
	SAMUEL GRAHAM	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/12/2005 and 7/21/2005*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 24 is objected to because of the following informalities:

Lines 3-5 read "*a harmonic structure is further extracted from each component obtained through the frequency transform*" but should read "*a harmonic structure value is further extracted from each component obtained through the frequency transform*". Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claim 42 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 42 recites nothing more than a "program which causes a computer to execute", which is an abstract idea. A "program" is not a real thing, given that one can simply contemplate a computer program and one cannot be granted patent protection on contemplation. According to current office policy, a software program product may be statutory if it is claimed as a physical product, by reciting an encoded program stored on a "computer readable medium".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 25-26, 28, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 25, lines 4-6 read: "*each component obtained through the frequency transform of each frame is further divided into frequency bands of a predetermined bandwidth, a correlation value is calculated between the components that have predetermined frequency bands in the same frame*". However, since a component is equivalent to the frequency spectra of each frame, components are distinguished from one another and cannot share the same frame. Therefore, the predetermined frequency bands of each component cannot be "in the same frame". For the purpose of further examination the limitation will be interpreted to read "*each component obtained through the frequency transform of each frame is further divided into frequency bands of a predetermined bandwidth, a correlation value is calculated between said predetermined frequency bands in the same frame*"

Regarding claim 26, claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being dependant upon a parent claim rejected under 35 U.S.C. 112, second paragraph.

Regarding claim 32, lines 13-15 read: "*a step of estimating a speech signal-to-noise ratio of the input acoustic signal based on comparisons, for a predetermined number of frames,*

between (i) acoustic features extracted in said acoustic feature extraction step or the evaluation values calculated in said evaluation step and (ii) a first predetermined threshold". However, a speech signal-to-noise ratio is a rational number and a rational number cannot be represented by comparing values to a threshold. More specifically, comparisons to a threshold produces logical outputs, such as true or false and/or 1 or 0. The condition or status of a SNR value with respect to a threshold may be determined by comparison to a threshold but a ratio pertaining to SNR cannot be determined as such. The limitation contains a basic contradiction.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 22, 23, 29-31, 33, 35, 39, and 42 are rejected under 35 U.S.C. 103(a) as being obvious over Wu et al. (U.S. Pub. No. 6,272,460 B1), referred to herein as Wu.

Regarding claims 22, 39, and 42, Wu teaches a harmonic structure acoustic signal detection method, device, and computer program product comprising:

frames into which the input acoustic signal is divided at every predetermined time period (*pre-processor performs the FFT to produce a frequency spectrum for each frame of the digital speech signal, Column 5 lines 15-17*);

an acoustic feature extraction step of extracting an acoustic feature in each of said frames (*analog-to-digital converter provides digital speech data to feature extractor further responsively generates speech energy and the pitch detector preferably detects pitch for each frame by calculating correlation values between the spectral sum for each frame and a comb window (Column 4 lines 55-59 and Column 7 lines 34-37)*);

and a segment determination step of evaluating continuity of the acoustic features and of determining a speech segment according to the evaluated continuity (*confidence determiner next preferably determines a frame confidence measure for each frame which involves the harmonic index h_n and a confidence index compares the confidence measures of consecutive frames to determine the presence of a speech utterance, Column 10 lines 1-9 and lines 35-41*);

wherein in said acoustic feature extraction step, frequency transform is performed on each of the frames into which the input acoustic signal is divided at every predetermined time period (*pitch detector generates correlation values for each frame n in the utterance, pitch detector determines the optimum alternate frequency index which is the frequency that corresponds to a maximum alternate correlation value, and the confidence determiner determines harmonic index for each frame n by comparing the optimum frequency index with the optimum alternate frequency index for each frame n , speech energy is divided into equal-sized frames wherein each frame contains 10 milliseconds of speech data but frames of different lengths are within the scope of the present invention (Column 5 lines 15-27, Column 7 lines 40-44, Column 8 lines 58-61, Column 9 lines 30-45)*),

and the acoustic feature that is a value of a harmonic structure represented by a number is extracted (*a harmonic index equal to 1 indicates that the frame contains more than one frequency component, ant thus may be a speech signal (Column 9 lines 41-43)*);

and in said segment determination step, the speech segment is determined based on one of the following:

a correlation value between acoustic features in the same frame and a correlation value between acoustic features in different frames (*pitch detector multiplies comb window by a logarithm of spectral sum to generate correlation values for each frame n in the utterance wherein the spectral sum is a results of summing together the spectra of each frame set using the frame set scale values to align the spectra (Column 7 lines 5-45)*).

However, Wu discloses the claimed invention but Wu describes the acoustic feature and continuity determinations to be a part of the same process and Wu discloses that *a harmonic index (*acoustic feature*) equal to 1 indicates that the frame contains more than one frequency component, and thus may be a speech signal (Column 9 lines 41-43).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to separate the steps of determining speech based on measuring continuity and based on the indication of acoustic features (*harmonic index*), since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 1 t*

Regarding claim 23, Wu teaches the limitations of claim 22. Wu further teaches a harmonic structure acoustic signal detection method wherein:

said acoustic feature extraction step, a harmonic structure is further accentuated based on each component obtained through the frequency transform, and the acoustic feature is extracted (*noise suppressor calculates a spectral sum for each frame in the utterance by summing the spectrum of each frame with the spectra of the previous frames in each frame set and spectral summation enhances the magnitude of the spectra at the harmonic frequencies (Column 6 lines 16-23)*).

Regarding claim 29, Wu teaches the limitations of claim 22. Wu further teaches a harmonic structure acoustic signal detection method wherein:

In said segment determination step, continuity of the acoustic features is evaluated based on a correlation value between the acoustic features of different frames, and the speech segment is determined according to the evaluated continuity (*confidence determiner next preferably determines a frame confidence measure for each frame which involves the harmonic index h_n and a confidence index compares the confidence measures of consecutive frames to determine the presence of a speech utterance, Column 10 lines 1-9 and lines 35-41*). More specifically, the harmonic index is equivalent to the acoustic feature and the comparison of confidence measures over a series of frames is equivalent to a continuity evaluation. The harmonic index is a based on a calculation of correlation as disclosed in claim 1.

Regarding claims 30 and 35, Wu teaches the limitations of claim 22. Wu further teaches a harmonic structure acoustic signal detection method wherein:

said segment determination step, continuity of the acoustic features is evaluated based on distributions of the acoustic features in different frames, and the speech segment is determined according to the evaluated continuity (*confidence determiner next preferably determines a frame confidence measure for each frame which involves the harmonic index h_n and a confidence index compares the confidence measures of consecutive frames to determine the presence of a speech utterance, Column 10 lines 1-9 and lines 35-41*). More specifically, the comparison of consecutive frames for the presence of the confidence measure, which is defined by the harmonic index, is equivalent to evaluating the distribution of the confidence measure.

Regarding claim 31, Wu teaches the limitations of claim 22. Wu further teaches a harmonic structure acoustic signal detection method wherein:

an evaluation step of calculating an evaluation value for evaluating the continuity of the acoustic features (*confidence determiner next preferably determines a frame confidence measure for each frame which involves the harmonic index h_n (Column 9 lines 41-43 and Column 10 lines 1-9)*);

and a speech segment determination step of evaluating temporal continuity of the evaluation values and of determining a speech segment according to the evaluated temporal continuity (*a confidence index compares the confidence measures of*

consecutive frames to determine the presence of a speech utterance, Column 10 lines 35-41).

Regarding claim 33, Wu teaches the limitations of claim 22. Wu further teaches harmonic structure acoustic signal detection method wherein:

an evaluation step of calculating an evaluation value for evaluating the continuity of the acoustic features; and a non-speech harmonic structure segment determination step of evaluating temporal continuity of the evaluation values and determining, according to the evaluated temporal continuity, a non-speech harmonic structure segment that has a harmonic structure but is not a speech segment (*confidence determiner next preferably determines a frame confidence measure for each frame which involves the harmonic index* h_n *and a confidence index compares the confidence measures of consecutive frames to determine the presence of a speech utterance, Column 10 lines 1-9 and lines 35-41*).

7. Claims 24, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda et al. (U.S. Patent No. 4,538,234).

Regarding claim 24, Wu teaches the limitations of claim 23. Wu further teaches a harmonic structure acoustic signal detection method wherein:

said acoustic feature extraction step, a harmonic structure is further extracted from each component obtained through the frequency transform, and a component which is obtained through the frequency transform that includes the harmonic structure is judged to be the acoustic feature (*the confidence determiner first preferably determines a*

harmonic index for each frame n by comparing the optimum frequency index with optimum alternate frequency index for each frame n and a harmonic index equal to 1 indicates that the frame contains more than one frequency component and thus may be a speech signal (Column 9 lines 40-45)).

However, Wu fails to teach a component containing predetermined frequency bands. *Honda teaches, in analogous art, the concept of dividing an input signal into subbands and preforming a calculation between the subband samples in a frame (Column 6 lines 26-34 and Column 3 lines 11-16).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the division of a signal into subbands disclosed in Honda with the harmonic structure extraction from a frame disclosed in Wu in order to reduced the processing time of the method since the grouping of frame energy into a subband would reduce the number of comparisons necessary for the correlation calculations.

Regarding claim 25, Wu teaches the limitations of claim 22. Wu further teaches a harmonic structure acoustic signal detection method wherein:

said acoustic feature extraction step, each component obtained through the frequency transform of, a correlation value is calculated using values within the same frame (*pitch detector multiplies comb window by a logarithm of spectral sum to generate correlation values for each frame n in the utterance wherein the spectral sum is a results of summing together the spectra of each frame set using the frame set scale values to align the spectra and each frame n has a corresponding frame set that includes frame n*

and a selected number of previous frames. (Column 2 lines 11-12 and Column 7 lines 5-45)),

and the acoustic feature is extracted based on the calculated correlation value (*pitch detector determines the optimum alternate frequency index which is the frequency that corresponds to a maximum alternate correlation value and the confidence determiner first preferably determines a harmonic index for each frame n by comparing the optimum frequency index with optimum alternate frequency index for each frame n, (Column 8 lines 58-60 and Column 9 lines 40-45)*).

More specifically, since the frame set includes the current frame n, the spectra sum is calculated using the frame set, and the correlation values are calculated using the spectra sum, then the correlation values have been determined by using spectral components within the current frame.

However, Wu fails to teach a component containing predetermined frequency bands. *Honda teaches, in analogous art, the concept of dividing an input signal into subbands and performing a calculation between the subband samples in a frame (Column 6 lines 26-34 and Column 3 lines 11-16).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the division of a signal into subbands disclosed in Honda with the harmonic structure extraction from a frame disclosed in Wu in order to reduced the processing time of the method since the grouping of frame energy into a subband would reduce the number of comparisons necessary for the correlation calculations.

Regarding claim 27, Wu teaches the limitations of claim 22. Wu further teaches a harmonic structure acoustic signal detection method wherein:

> in said acoustic feature extraction step, each component obtained through the frequency transform of each frame, a correlation value is calculated between the components in different frames, and the acoustic feature is extracted based on the calculated correlation value (*pitch detector multiplies the comb window by a logarithm of spectral sum to generate correlation values for each frame n in the utterance wherein the spectral sum is a results of summing together the spectra of each frame set using the frame set scale values to align the spectra and each frame n has a corresponding frame set that includes frame n and a selected number of previous frames. (Column 2 lines 11-12 and Column 7 lines 5-45)*).
>
> More specifically, since the frame set includes the current frame n, the spectra sum is calculated using the frame set, and the correlation values are calculated using the spectra sum, then the correlation values have been determined by using spectral components within the current frame and the other frames in the frame set.
>
> However, Wu fails to teach a component containing predetermined frequency bands. *Honda teaches, in analogous art, the concept of dividing an input signal into subbands and performing a calculation between the subband samples in a frame (Column 6 lines 26-34 and Column 3 lines 11-16).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the division of a signal into subbands disclosed in Honda with the harmonic structure extraction from a frame disclosed in Wu in order to reduced the processing time of the

method since the grouping of frame energy into a subband would reduce the number of comparisons necessary for the correlation calculations.

8. Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Kamba (U.S. Pub. No. 2003/0171916 A1).

Regarding the claims 26 and 28, Wu in view of Honda teaches the limitations of claims 25 and 27. However, Wu in view of Honda fails to teach a harmonic structure acoustic signal detection method wherein said acoustic feature extraction step, a difference is further calculated between a maximum value and a minimum value of the correlation values in each frame, and the acoustic feature is extracted based on the difference. *Kamba teaches the concept of calculating a difference between maximum and minimum correlation values in order to extrapolate a tone (Paragraph 74 lines 1-8).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the concept of taking the difference between extreme correlation values disclosed in Kimba with the acoustic feature extraction from a frame disclosed in Wu in view of Honda in order to avoid undesired extrapolation from unnatural sound (Kimba, Paragraph 74 lines 15-17).

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Borth et al. (U.S. Patent No. 4,628,529).

Regarding claim 32, Wu teaches the limitations of claim 31. However, Wu fails to teach a harmonic structure acoustic signal detection method wherein a step of determining the speech segment based on the evaluation value calculated in said evaluation step, in the case where a estimated speech signal-to-noise ratio is equal to or higher than a second predetermined threshold, and in said speech segment determination step, the temporal continuity of the evaluation values is evaluated and the speech segment is determined according to the evaluated temporal continuity, in the case where the speech signal-to-noise ratio is lower than the second predetermined threshold. *Borth teaches, in analogous art, the concept of selecting a processing method based on the outcome of comparing an SNR estimates to a pre-selected threshold (Column 5 lines 67-68 and Column 6 lines 1-5).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the concept of determining a processing method dependant a comparison of SNR to a threshold disclosed in Borth with both the continuity and acoustic feature determinations of speech segment disclosed in Wu in order to optimize processing speed by allowing the process to choose, between acoustic feature and continuity, the faster of the two speech segment determination methods.

10. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Rao et al. (U.S. Patent No. 6,775,629 B2).

Regarding claim 34, Wu teaches the limitations of claim 33. However, Wu fails to teach a harmonic structure acoustic signal detection method wherein an extraction step of extracting, as

the acoustic feature, an identifier of a frequency band in which the component has a maximum value or a minimum value of the correlation values in the same frame. *Rao, in analogous art, teaches the concept of identifying a frequency location proximate to an amplitude peak in the frequency transform and/or identifying multiple frequency locations (Column 10 lines 7-22).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the concept of identifying multiple frequency locations proximate to a peak with the harmonic detection method disclosed in Wu in view of Honda in order to identify the tone (Rao, Column 10 lines 7-9).

11. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Tsutsui (U.S. Patent No. 5,471,558).

Regarding claim 36, Wu in view of Honda teaches the limitations of claim 22. However, Wu in view of Honda fails to teach a harmonic structure acoustic signal detection method wherein in said segment determination step, the continuity is evaluated based on correlation values between two or more types of frames of different time periods. *Tsutsui, in analogous art, teaches that the frame length decision circuit receives the input signal and determines a variable frame length, i.e., the number of samples in each frame (Column 11 lines 29-31).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the frame length decision circuit disclosed in Tsutsui with the acoustic features (correlation values) disclosed in Wu in view of Honda in order to more accurately

ascertain the speech signal via correlation because a frame of greater length will yield a higher correlation result.

12. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Tsutsui and further in view of Borth et al. (4,628,529).

Regarding claim 37, Wu in view of Honda teaches the limitations of claim 36. However, Wu in view of Honda further in view of Tsutsui fails to teach a harmonic structure acoustic signal detection method wherein frames of different time periods is selected based on a speech signal-to-noise ratio of the input acoustic signal. *Borth teaches, in analogous art, the concept of selecting a processing method based on the outcome of comparing an SNR estimates to a pre-selected threshold (Column 5 lines 67-68 and Column 6 lines 1-5).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the concept of choosing a processing method based on SNR estimates to a pre-determined threshold disclosed in Borth with the correlation results used to measure continuity disclosed in Wu in view of Honda further in view of Tsutsui in order to improve the clarity of the device by disregarding those correlation values that cannot be adequately distinguished from noise values.

13. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Rozinaj et al. (U.S. Patent No. 5,818,928).

Regarding claim 38, Wu in view of Honda teaches the limitations of claim 36. However, Wu in view of Honda fails to teach a harmonic structure acoustic signal detection method wherein in said segment determination step, the continuity is evaluated based on a corrected correlation value calculated using a difference between (i) a correlation value between the acoustic features of frames and (ii) an average value of the correlation values of a predetermined number of frames. *Rozinaj, in analogous art, teaches the concept of determining speech the comparison of the difference between the long-time average and the short-time average of a signal property with a threshold (Abstract lines 15-18, Column 3 lines 66-68, and Column 4 lines 1-3).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the concept of comparing the difference of long and short time averages to a threshold disclosed in Rozinaj with the acoustic feature values disclosed in Wu in view of Honda in order to provide a fast and reliable distinction between speech and echo (Rozinaj, Column 2 lines 1-7).

14. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Levinson et al. (U.S. Patent No. 4,277,644).

Regarding claim 40, Wu in view of Honda teaches the limitations of claim 40, see regarding claim 22 above. However, Wu in view of Honda fails to teach a speech recognition device comprising a recognition unit operable to recognized speech in the speech segment determine by said segment determination unit. *Levinson, in analogous art, teaches to segment a continuous speech pattern and recognized the words of a speech pattern (Column 3 lines 12-15).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to further include the segmentation and recognition of a speech signal disclosed in Levinson with the speech recognition device disclosed in Wu in view of Honda in order to make the device more versatile by allowing the device to recognize the speech in addition to the identification of the same speech.

15. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Honda further in view of Hagen et al. (U.S. Patent No. 6,058,359).

Regarding claim 41, Wu in view of Honda teaches the limitations of claim 40, see regarding claim 22 above. However, Wu in view of Honda fails to teach a speech recognition device comprising a recognition unit operable to recognize speech in the speech segment determined by said segment determination unit. *Hagen, in analogous art, teaches buffers that are used to store the gain values of the present speech segment as well as the gain values of a predetermined number ob preceding speech segments (Column 4 lines 16-19).* Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further include the storing of a speech segment disclosed in Hagen with the speech recognition device disclosed in Wu in view of Honda in order to make the device more versatile by allowing the device to perform further processing or presentation of the stored/recorded data.

Conclusion

1. For copies of the signed IDS (Form 1449), please refer to the previously mailed information regarding the application filed on 7/21/2005.

2. Any response to this Office Action should be faxed to (571) 273-8300 or mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22314

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Graham whose telephone number is (571) 270-5360. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samuel Graham/
Patent Examiner
Art Unit 2626

/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2626